

Claims:

Having thus described the invention, what is claimed is:

1. A system for coupling a plurality of sources to a single processing chip, the system comprising:

- 5 a substrate including a system for processing Ethernet inputs;
a clock input for determining a time period for processing the input from a single source;
a single input gate for a single input; and
a sequencer which determines which source is being processed during the time period
and which services a different source during the next clock period.

10 2. A system of the type described in Claim 1 wherein the system further includes a signal
for indicating when a given source is being processed.

15 3. A system of the type described in Claim 2 wherein the signal indicating when a given
source is being processed includes a strobe signal which occurs at every time when the input
from that source is being processed.

4. A method of coupling a plurality of sources to a processing chip, the steps of the method comprising:

providing the chip with a single input pin and a single output pin;

sequentially coupling one of the sources to the single input pin and the single output pin;

5 providing a signal indicating which source is being coupled at a given time; and

providing a clock input which identifies the time for serving a particular source.

5. The method of Claim 4 further including the step of serving the plurality of sources sequentially in order and starting that sequence with a given source serviced when the signal indicating which source is being coupled is set.

10 6. The method of Claim 4 wherein the step of providing a signal indicating which source is coupled includes a strobe signal which indicates that a particular source is serviced and the other sources are served successively at clock intervals relative to the strobe signal.

7. A serial Ethernet processing system on a substrate for processing a plurality of independent Ethernet data sources, the system comprising:

a system which receives and processes serial Ethernet signals on the substrate; and

5 an input and output system carried by the substrate and including at least four ports for connecting to the plurality of independent Ethernet data sources, the four ports including an input port, an output port, a clock port on which clock signals are provided and a port on which an identifying signal which identifies one of the independent data sources which is serviced at a given clock signal.

8. A processing system of the type described in Claim 7 wherein the plurality of
10 independent Ethernet data sources are served in order and the identifying signal includes the clock signal on which one of the data sources is serviced.

9. A system for processing a plurality of serial Ethernet communications wherein the system includes a strobe signal and a clock signal, the system comprising:

15 a processor coupled to a multiplexed set of ports for input and output;
a first storage for a first Ethernet communication;

a second storage for a second Ethernet communication;

in response to a strobe signal, coupling the processor to the first storage for handling the first Ethernet communication; and

20 in response to a clock signal, changing from the one Ethernet storage to another Ethernet storage, whereby a single set of ports is coupled to a plurality of networks in sequence, with the sequence being responsive to the strobe signal.

10. A system of coupling a plurality of sources to a single processor including the elements of Claim 1 wherein the sequencer includes a counter which indicates which source is serviced at any time and the counter is coupled to the clock input for indexing the counter in response to a clock pulse.

5 11 A system for coupling a plurality of sources to a single processor including the elements of Claim 10 wherein the system includes a strobe input and the counter is coupled to the strobe input and is reset by a signal on the strobe input.

For filing